

Chapter 3 - System Processing Overview

INTRODUCTION

This chapter presents an overview of the processing capabilities and automated features of R★STARS. It has been developed to give the reader a general understanding of R★STARS on-line capabilities and batch processing functions. This chapter serves as a foundation for understanding how transactions are entered, edited, viewed and reported in R★STARS.

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3.1 ON-LINE PROCESSING

The R★STARS on-line features give users the ability to enter various types of accounting, profile maintenance, and system management transactions and have them recorded immediately in the data base. Each of these types of transactions is fully edited prior to posting. The R★STARS user can use inquiry functions to retrieve records from both the R★STARS financial tables and profiles for display on the screen.

When in doubt about how to proceed, an on-line Help capability provides information about error codes, coding rules, and screen usage. The “Link To” and “Interrupt” features of R★STARS make movement between on-line functions quick and easy for the experienced user while inexperienced users have menus to guide them through on-line R★STARS functions. The R★STARS on-line user is constantly under the control of the R★STARS security subsystem which prevents unauthorized access to on-line functions.

The following sections present an overview of each on-line feature of R★STARS.

On-Line Profile Maintenance

Profile maintenance transactions entered on-line have an immediate effect on the system because they cause on-line update to the R★STARS data classification and validation profiles.

Most R★STARS profiles have been designed to permit agencies to perform their own profile maintenance activity. On-line profile maintenance transactions can be entered to add, change and delete records in the R★STARS profiles.

Each profile maintenance transaction is edited on-line to provide immediate feedback on the status of the update. Any errors encountered must be corrected prior to posting the transaction to the profile. Profile maintenance is discussed in more detail in the R★STARS Data Entry Guide Chapters 5 and 6.

On-Line Accounting Transactions

The effect of accounting transactions entered on-line can either be immediate or not recorded until the next batch update cycle. This is possible because R★STARS offers several options for the on-line entry of accounting transactions:

- 0 — Batch edit and batch post
- 1 — On-line edit and batch post
- 2 — On-line edit and on-line post

For both edit modes '0' and '1,' the effect of an accounting transaction entered on-line is not recorded until the next batch update cycle (if the batch is released for processing). Under edit mode '0,' the transaction is not edited during transaction entry. This mode is commonly used for key data entry and for automated interface transactions. Under edit mode '1,' only data edits are performed on-line. Data edits include validation edits against system profiles or ensuring that the effective date falls within an open month. During the nightly batch update cycle, profiles will be revalidated for any changes or updates.

Financial transactions entered using edit mode '2' are immediately edited and posted to R★STARS financial tables.

Under edit mode '2,' both profile and fund control edits are performed on-line. Profile edits, described above, are performed to ensure that valid and reasonable codes are entered on each transaction. Fund control edits ensure that the transaction does not cause available budgetary or cash balances to be over-expended (such as appropriations) and ensures that match requirements are met, such as a requirement that an encumbrance document which is to be liquidated exists in the system.

Transactions entered with edit mode '2' are **NOT** re-edited, nor are they reposted during the nightly batch update process. However, transactions entered in edit mode '2' update the history file during the nightly batch update process, if the batch has been balanced and released. Each user's ability to use the various edit modes is controlled through the 96A Security Profile.

R★STARS Transactions Split process is designed to reduce the manual effort necessary for repetitive posting of like transactions. This process provides the capability for splitting any type of transaction such as revenues, expenditures, pre-encumbrances, and encumbrances. The split accounting classification is established on the 550 Recurring Transaction Profile. A Recurring Transaction Index (RTI) is designated as a "split RTI" by assigning an RTI Type of 'S' on the Recurring Transaction Profile. Split transactions can be entered in edit mode '0,' '1,' or '2.'

See Data Entry Guide Chapter 3 for detailed discussion of the R★STARS transaction split process.

On-Line System Management Transactions

An important on-line feature of R★STARS is the ability to control system processing by means of the entry of system management transactions. These include transactions which request frequency reports, generate recurring accounting transactions, close the prior accounting month or disable system functions.

Each afternoon, before the batch update cycle is run, the R★STARS system administrator can review the indicator settings in the R★STARS profiles and enter the appropriate system management transactions for the next batch update cycle.

On-Line Financial Table Inquiry

On-line inquiry is provided for many of the R★STARS financial tables and is controlled by the user's security record. The user can enter a specific characteristic which uniquely identifies a record (called a key) in the data base and, if that record exists, it is retrieved and its contents are displayed.

The user may specify the transaction year and accounting period to be displayed; if not, the current indicators set in the 97 System Management Profile are displayed. The user may also specify that either activity or cumulative balances be displayed.

On-Line Security

R★STARS security requires that each user log-on with a valid user ID and password. Once logged on, the user may only perform those functions authorized in his/her Security profile.

Examples of on-line functions which may be authorized include the following:

- Financial transaction data entry for a single agency or range of agencies for all transaction codes or a range of transaction codes.
- Profile maintenance for a single agency or range of agencies on a profile-by-profile basis.
- On-line inquiry to financial tables and on a screen by screen basis.
- Performance of specialized functions such as releasing batches and overriding fund control edits.
- Use of certain indicator values, such as the disbursement method indicator.

Whenever unauthorized functions are attempted by R★STARS users, the system displays an error message indicating the security restriction.

The log-on user ID, date, and time are recorded for each profile maintenance, accounting, and system management transaction processed by the system to provide an audit trail of every function performed by the user.

On-Line Help, Link To, and Interrupt

R★STARS has three additional on-line facilities: Help, Link To, and Interrupt. The Help facilities are designed for use by both the novice and experienced user. They provide on-line information about error codes, data fields, and screen usage. The Help facilities are accessed by selecting F1 from any profile or data entry screen.

The user may move from screen to screen through the system menus or may move quickly and easily between screens using the Link To feature. The Link To feature allows the user to avoid menus. The user may enter a screen number in the Link To field of the screen displayed. When the enter key is selected, program control is passed to the screen specified in the Link To field. This process can be repeated indefinitely.

Interrupt provides additional functionality by returning program control to the originating screen when the F9 key is selected again. When the original screen is returned, all data values present at the start of Interrupt are redisplayed.

Interrupt and Link To features can also be used together to navigate between multiple screens. For example, the user can interrupt to another screen using the F9 key and then link to an additional screen by using the enter key. The F9 key can then be used to return to the original screen.

When used together, Help, Link, and Interrupt provide a powerful and efficient set of tools for the R★STARS on-line user because less time is spent moving from function to function and fewer CICS transactions are entered.

3.2 BATCH PROCESSING

The R★STARS Batch Update Cycle edits transactions and updates the R★STARS database for those transactions entered in edit modes '0' and '1.' The nightly batch update cycle includes those procedures that are scheduled to run each business night.

The R★STARS nightly update cycle begins with a series of procedures which generate financial transactions. These transactions are a major source of input to the R★STARS input, edit, update process. The procedures which generate these transactions are as follows:

- **Recurring Transaction Subsystem** — automatically posts recurring transactions which have been scheduled and released.
- **Cash Management Improvement Act (CMIA)** — The CMIA of 1990 provides for payment of interest on excess federal funds, or for state funds expended in excess of federal funds received. CMIA applies to those expenditures that are automatically charged to a grant. Funds are available for draw down on a pre-determined clearance day.
- **Other Subsystems** — interface with R★STARS to generate accounting transactions. These include Fixed Assets, Cost Allocation and Labor Distribution subsystems, as well as agency-operated systems which interface with R★STARS.
- **R★STARS On-line Transaction Entry** — Financial transactions entered into R★STARS using input, edit, update modes '0' and '1.'

The R★STARS Input, Edit, Update procedure is the key process in the nightly batch update cycle. It performs the following functions:

- Reads the accounting transactions generated by R★STARS and other subsystems and interfaces.
- Rejects interface transactions that fail minimum edit criteria such as duplicate batch ID.
- Performs profile edits and fund control edits for all financial transactions processed during the Batch Update Cycle.
- Reports errors detected in the accounting transactions.
- Updates financial tables with those transactions that pass all edits.

Once the input, edit, update process is complete, three additional processes are performed: payment processing, interface extract, and reporting.

The R★STARS Payment Processing process performs the following functions:

- Generates warrants, direct deposits and remittance advices.
- Creates accounting transactions which are input into the next input, edit, update cycle.
- Updates transactions on the Accounting Event Table and Internal Transaction File.
- Escrows and applies vendor payments to outstanding tax liabilities.
- Applies vendor payments to backup withholding and agency accounts receivable offset.

The R★STARS interface extract procedure reads the control tables, accounting transaction tables, and financial tables and creates interface records for R★STARS subsystems and other user systems.

R★STARS provides two important reporting related functions. The first is the 91 Report Request profile function. Using this function, users may request that any of the standard reports be produced. Many of the financial reports can be tailored to the needs of each user through a series of detail level options. Report requests that are recurring in nature, such as weekly or monthly, can be identified as such and will be run automatically by the system on the specified frequencies.

Report Distribution is the second reporting function. In addition to the 91 Report Request Profile, R★STARS also provides a 95 Report Distribution Profile. This profile is used to specify where the report is to be routed. A separate distribution record can be made for each report request, or a standard distribution may be defined. Additional information on R★STARS reporting capabilities can be found in Chapter 10.